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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,622	06/28/2001	Atsushi Fujii	KINOSHITAC-2	5759
7590 04/13/2004			EXAMINER	
Flynn Thiel Boutell & Tanis 2026 Rambling Road Kalamazoo, MI 49008-1699			YAO, SAMCHUAN CUA	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/869,622	<b>Applicant(s)</b> FUJII ET AL.	
	<b>Examiner</b> Sam Chuan C. Yao	<b>Art Unit</b> 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 9 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Claim Objections*

1. Claim 9 is objected to because of the following informalities: the term "*product*" should be replaced with a term --production--. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102/103*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- AP*  
*4/8/04*
4. Claims 1, 3 and ~~4~~ are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 2-122919 A.

JP '919 discloses a process of making a foamable polyolefin sheet, the process comprises extruding a polyolefin foamable raw sheet (3) to a smooth conveyor supporting belt (6) having a heated roller (4'); heat-compressing the foamable sheet between a nip of roller (4) and the heated roller (4'); after the heat-compressing step, heating the foamable sheet to a temperature to initiate a

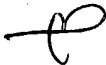
foaming of the foamable sheet thereby, obtaining a foamed sheet; and then peeling the foamed sheet from the conveyor supporting belt (abstract; figure 1; pages 98-99).

The limitation *"the surface temperature of the nip roller being controlled to be lower than the temperature of the close-contact medium"* is taken to embrace the process taught by JP '919, because, as illustrated in figure 1, roller (4') in a conveyor belt (6) is heated, while roller (4) is not heated.

Although not explicitly disclosed, the thermo-compression bonding of a foamable sheet to a conveyor supporting belt must occur between roller (4) and heated roller (4') in a belt, in view of the similarity of the production processes. Moreover, the foamable sheet must inherently be bonded on a conveyor supporting belt, during the foaming initiation of a foamable sheet in the process taught by JP '919, because the foamable sheet is thermo-compression bonded to a belt, and as evidence from a teaching of JP '919 which discloses a resultant foamed sheet is removed from a supporting conveyor belt by **peeling** (page 99), and the objective of the JP '919 is to ensure that a foamable sheet is in *"press-contact"* with a smooth supporting conveyor belt in order to prevent formation of foam wrinkles (abstract). In any event, it would have been obvious in the art to thermo-compress bond a foamable sheet to a conveyor supporting belt thereby forming a bond between them during the initiation of foaming in order to ensure that there is a *"press-contact"* between the foamable sheet and the conveyor supporting belt, thereby preventing the formation of foam wrinkles.

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With respect to claim 3, see figure 1.

 With respect to claim ~~9~~, in view of the similarity of the production processes, the limitation would/should naturally flow from the process taught by JP '919. In any event, since it is conventional in the art to thermo-compression bond a foamable sheet to a substrate between a nip of compression rollers, where at least one of the rollers exerts a linear force across a foamable sheet, this claim would have been obvious in the art.

5. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2-122919 as applied to claim 1 above.

With respect to claim 2, since it is conventional in the art to interchangeably use a non-contact heater and a contact heater such as a heated roller to initiate foaming of a foamable material, it would have been obvious in the art to replace the non-contact heater taught by JP '919 with a heated roller to activate a foamable sheet on a conveyor supporting belt.

With respect to claim 4, see figure 2 of JP '919. It would have been an obvious expediency in the art to provide a pair of heaters (7,7') in a process illustrated in figure 1 for activating a foamable sheet in order to uniformly heat an upper and underside surfaces of the foamable sheet.

### ***Response to Arguments***

6. Applicant's arguments with respect to claim 1 has been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam Chuan C. Yao  
Primary Examiner  
Art Unit 1733

Scy  
04-08-04